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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,111	12/27/2001	John M. Daly	TI-32944	1681
23494	7590	06/18/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			ARNOLD, ADAM	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	

2671

DATE MAILED: 06/18/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/035,111

Applicant(s)

DALY ET AL.

Examiner

Adam Arnold

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10,13,14 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10,13,14 and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The examiner acknowledges the receipt and entry of the applicant's amendment.

1. The indicated allowability of claims 10, 13, 14 and 17-22 is withdrawn in view of the newly discovered reference(s) to Erb, U.S. Patent No. 5,347,619 and Igarashi, U.S. Patent No. 6,549,201. Rejections based on the newly cited reference(s) follow.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10, 13, 14, 17, 18, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erb, U.S. Patent No. 5,347,619 in view of Igarashi, U.S. Patent No. 6,549,201. Referring to claim 10, Erb discloses a method for detecting an invalid (or complex) polygon on a computer device (col. 2, line 27—although the claim states “handheld computer device,” that phrase is in the preamble and is not supported in the rest of the claim) comprising selecting a pair of lines that do not share a common starting point (Figure 5, Nos. 101 and 103), determining if the selected pair of lines crossover (col. 2, lines 36-43), determining the polygon is invalid if the lines crossover (col. 2, lines 44-48—Erb used the term “complex” polygon to mean the same

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thing as the applicant's "invalid" polygon), and repeating the steps for the remaining pairs of lines from the set of lines (col. 2, lines 48-51). Erb does not disclose inputting from a user on a GUI a plurality of connected lines that form a polygon or indicating the invalidity to the user. Igarashi discloses a user entering sketches at a GUI (col. 2, lines 56-60) and the indicating the invalidity of a polygon to the user (col. 8, line 16). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to input from a user on a GUI a plurality of connected lines that form a polygon and indicate the invalidity to the user. One of ordinary skill in the art would have been motivated to do this in order to create precise graphical shapes (see Igarashi, col. 1, lines 32).

Referring to claim 13, Erb discloses determining a starting and ending point for each line in the pair of lines (col. 2, lines 34-38), determining an overlap interval (col. 2, line 38, i.e. bounding box), determining if the overlap interval is a valid interval (col. 2, lines 46-48), calculating a value for each line based on the overlap interval if the overlap interval is valid (col. 2, lines 45-46, i.e. calculation of the edges under consideration), comparing the values for each line if overlap interval is valid (col. 2, line 47), and detecting line crossover based on the comparison (col. 2, line 47, i.e., intersection is within interval and polygon is complex).

Referring to claim 14, Erb discloses where the set of lines is a set of all possible combination of pairs of lines in the polygon (col. 2, line 50).

Referring to claim 17, Erb in view of Igarashi does not disclose where the validity of a polygon is tested after a new line is added to the polygon and before the user completes drawing the polygon. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to test the validity of a polygon after a new line is added to the polygon

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and before the user completes drawing the polygon. One of ordinary skill in the art would have been motivated to do this in order to identify an invalid polygon given only a list of vertices (col. 1, line 10).

Referring to claim 18, Erb discloses where the validity of a polygon is tested after it has been completely specified (see Figure 3A showing a completely specified polygon).

Referring to claim 19, Erb discloses where the validity of a polygon is tested only after a user specifies that it be tested (see col. 2, line 28, where a “hint” that a polygon is polygon is specification to test it).

Referring to claim 20, Erb discloses where the overlap interval is defined as  $[X1, X2]$  (col. 4, lines 12-15 and Figure 4A, No. 109) and calculating a Y-value for each line at the beginning of the overlap interval and a Y-value at the end of the overlap interval (col. 4, lines 12-15 and Figure 4A, No. 109).

4. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erb in view of Igarashi, further in view of Gosper. Referring to claim 21, Erb in view of Igarashi does not disclose comparing the Y values at X1 for the lines and comparing the Y values at X2 for the lines. Gosper discloses comparing the Y value for a first line and a second line and comparing a second Y value for the first line and second line (page 1, paragraph 3). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to compare the Y values at X1 for the lines and comparing the Y values at X2 for the lines. One of ordinary skill in the art would have been motivated to do this in order to quickly and efficiently determine if the polygon is valid (see Gosper, page 1, paragraph 2).

Referring to claim 22, Erb in view of Igarashi does not disclose where a crossover has occurred if  $(Y1a \leq Y1b \text{ and } Y2a \geq Y2b)$  or  $(Y1a \geq Y1b \text{ and } Y2a \leq Y2b)$  are true. Gosper discloses where a crossover has occurred if  $(Y1a \leq Y1b \text{ and } Y2a \geq Y2b)$  or  $(Y1a \geq Y1b \text{ and } Y2a \leq Y2b)$  are true (page 1, paragraph 3). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to determine a crossover has occurred if  $(Y1a \leq Y1b \text{ and } Y2a \geq Y2b)$  or  $(Y1a \geq Y1b \text{ and } Y2a \leq Y2b)$  are true. One of ordinary skill in the art would have been motivated to do this in order to quickly and efficiently determine if the polygon is valid (see Gosper, page 1, paragraph 2).

### ***Response to Arguments***

The examiner disagrees with the applicant's contention that the application is in condition for allowance. In light of the new grounds of rejection, this action is Non-Final.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam Arnold whose telephone number is 703 305 8413. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached on 703 305 9798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
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